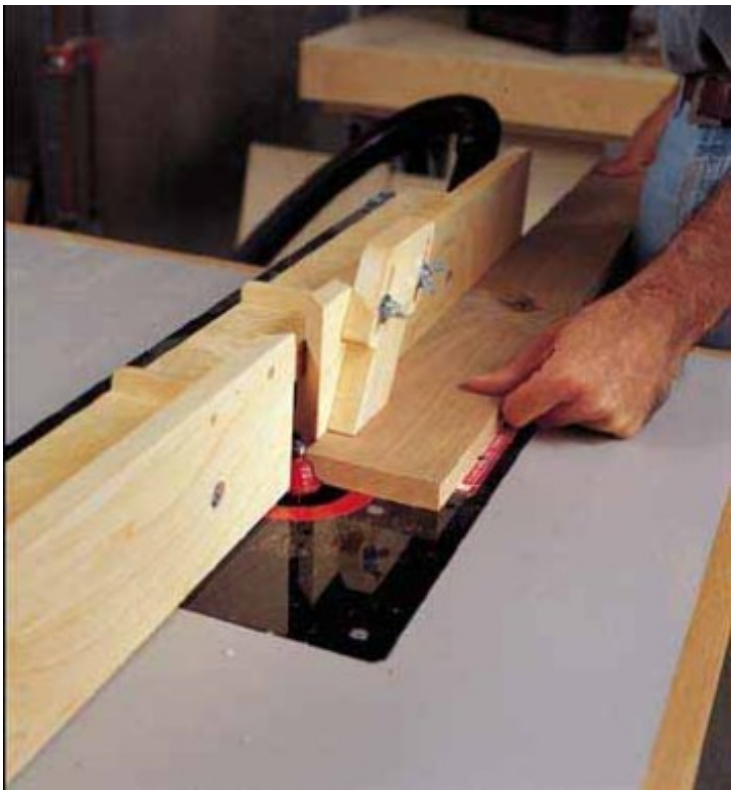
Router Fence for a Table Saw | Popular Woodworking Magazine



Routing the Plate Opening: A good way to get a parallel and square opening is to use the saw fence as a guide for two of the cuts. Measure the offset from the edge of the router base to the side of the spiral bit and use this in setting the fence for each cut, parallel to the fence. Clamp a square piece of wood in place as a guide for the sides of the opening, perpendicular to the saw fence. Next form the rabbet that holds the insert in place by using the same procedure and bit you used to cut the opening

Your table saw is a router table and jointer just waiting to happen. Replace one of the saw's wings (or adapt your existing table board) to hold a router table insert, and you're in business. Add this router fence to your table saw's fence and you get a router fence with the capacity to handle boards few commercial router tables could even touch. Make a couple quick adjustments to the fence and you can edge-joint boards for gluing up panels -- no jointer necessary.

This fence was designed for the Little Shop Mark II, a rolling workshop that was featured in the September 1999 issue (#110). However, this fence will work with just about any contractor- or cabinet-style table saw.

This fence is essentially two long plywood boxes with hardwood face fronts on them. The space between the boxes is where the router bit spins. One of the boxes stores router bits, the other acts as a dust collection chute. Though construction isn't complex, study the diagrams carefully before you begin.

It's in the Hole

First cut the hole for the insert in the top of your saw's table. If you've built the Little Shop Mark II, use the end of the long top for your table. For contractor's saws, you can use the table board on the right side of the saw. Or you can replace one of your saw's wings with a piece of laminate-covered plywood. Lay out the spot for the router table insert. I put the insert in the middle of the width of the table and between the back and front rail from the end. Cut the opening for the insert as shown in the photos. Mount the insert to the router. Drop it in the opening and adjust it so it's flush with the table.

Making the Fence

First you build the body of the fence, and then you attach the fence faces afterward. Begin by cutting the opening for the bit on the front piece. Use a rasp to round over the inside right edge of the opening to help deflect chips into the box that will later be connected to a shop vacuum. Next cut the bottom piece for the right box and cut a 45-degree chamfer on the end next to the opening for the bit, again to deflect chips.

Routing Slots in the Fence: Clamp a stop to the saw fence to stop the assembly at the end of its cut. Drill a 1/4" hole at the beginning of the cut and with the router running, lean the fence assembly against the stop, touching the table and lever it down over the hole that you just drilled. Gently push the assembly to the end of its cut and lever-lift the assembly off the table.

Assemble the boxes like this: First attach the two end pieces of the left box to the left bottom piece. Then attach the larger end piece for the right-side box (with the dust collection hole) to the bottom piece for the right box. Now nail the front and back pieces to the left and right assemblies. Be sure to hold the bottom edges flush. For the top part of the fence, keep in mind there are three fixed pieces -- one on each end and one in the middle. And there are two removable pieces that give you access to the bit storage, the dust collection tube and the wing nuts that will hold the fence faces in place. Attach the three fixed top pieces and the support.

Now drill the holes in the back piece to accept the 1/4" x 20 t-nuts that attach the router fence to the saw fence.

Make it Adjustable

Now it's time to cut slots in the front piece that will be used for attaching the fence faces to your box and allow the fence faces to be adjustable. Rout the 1/4" x 2" slots for adjusting the fence faces according to the diagram. Drop-cut plunge routing is something I'll only do with larger assemblies such as this. Smaller pieces don't have enough mass to absorb a kickback. If you're unsure about this process, then use a less accurate, but safer, method of drilling two 1/4" holes and connecting them with a jigsaw. The object is to get a 1/4"-20 bolt to slide smoothly throughout the length of the 2" slot. Now cut a 45-degree angle on the ends of the fence faces, leaving a 1/8" flat end on the miter for durability. Lay out and drill the relief holes for the 1/4" x 20 bolt heads then follow these holes with 1/4" holes for the bolt shanks.

Jointer Insert: For edge jointing, cut a piece of laminate to the size of one fence face. Make it a little tall so you can pull it out from between the fence face and the fence. Cut two slots to clear the bolts on the fence. Chuck a straight bit in the router and set it flush with the offset fence face and you've made an edge jointer. Pull the spacer out to resume normal operation.

Tiny but Tough Fingers

The last step is to make finger boards. The method I use is to rip a piece of 3/4" wood to 3-1/8" and about 8" long. When doing this, it's actually safer to have the blade height up a little higher than usual to prevent kickback. A good rule is to move your fence 1/4" after each cut until you've completed the finger board. The fingers on this board are thick enough to take a beating, but thin enough to flex with some strength. Make three finger boards. One for both sides of the fence and one for the router table insert, with its center right at the insert opening. PW

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Jim Stuard is a former associate editor for Popular Woodworking.